



NUCLEAR REGULATORY COMMISSION

[NRC-2022-0095]

NRC's Fiscal Years 2023-2027 Artificial Intelligence Strategic Plan

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft NUREG; request for comment; public meeting.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is requesting comments on the NRC's Fiscal Years (FY) 2023-2027 Artificial Intelligence (AI) Strategic Plan.

Specifically, the NRC would like input on the overall strategy as well as the agency's strategic goals presented in draft NUREG-2261 "Artificial Intelligence Strategic Plan:

Fiscal Year 2023-2027," actions to realize those strategic goals, potential challenges in achieving the outlined goals, and how to address key challenges and external factors.

The information gathered will be used to inform the development of the NRC's FY 2023-2027 AI Strategic Plan. The NRC is also announcing a virtual public meeting to receive comments on this document. The meeting will allow interested members of the public to submit their comments.

DATES: Submit comments by **[INSERT DATE 45 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]**. The NRC staff will hold a virtual public meeting through online webinar on August 3, 2022, from 1 p.m. to 3 p.m. Eastern Time (ET) to receive comments on the draft Artificial Intelligence Strategic Plan. Comments received after **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]** will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the **Federal rulemaking website**:

- **Federal rulemaking website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2022-0095**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the “For Further Information Contact” section of this document.

- **Mail comments to:** Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Branch.

- **Public Meeting:** You may provide comments through participation in the virtual public meeting discussed later in this document.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Matthew Dennis, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-3702; email: Matthew.Dennis@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID **NRC-2022-0095**, when contacting the NRC about the information for this action. You may obtain publicly available information related to this action by any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2022-0095**.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please

contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to PDR.Resource@nrc.gov. The draft AI Strategic Plan: Fiscal Years 2023-2027 is available in ADAMS under Accession No. ML22175A206.

- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. ET, Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the **Federal rulemaking website** (<https://www.regulations.gov>). Please include Docket ID **NRC-2022-0095** in your comment submission. You may also provide comments through participation in the virtual public meeting discussed later in this document.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

The NRC is an independent agency established by the Energy Reorganization Act of 1974 that began operations in 1975 as a successor to the licensing and regulatory

activities of the Atomic Energy Commission. The NRC's mission is to license and regulate the Nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety and to promote the common defense and security and to protect the environment. Consistent with that mission, the NRC plans to develop strategic goals to address AI in the context of its regulatory activities. For the purposes of the draft AI Strategic Plan, AI refers to a machine-based system that can go beyond defined results and scenarios and has the ability to emulate human-like perception, cognition, planning, learning, communication, or physical action. The draft AI Strategic Plan focuses on a broad spectrum of sub-specialties (e.g., natural language processing, machine learning, deep learning, etc.) which could encompass various algorithms and application examples which the NRC has not previously reviewed and evaluated. The NRC recognizes that AI technological maturity is rapidly evolving and usage is growing; therefore, NRC anticipates increased use of AI in NRC-regulated activities.

III. Discussion

The purpose of the AI Strategic Plan is to ensure the NRC's readiness to review and evaluate the use of AI in NRC-regulated activities. The NRC began actively coordinating across the agency and nuclear industry to better understand activities and plans for the use of AI in FY 2021. The agency: (1) conducted an internal scan to learn the scope of existing NRC projects which may fall within this technical area, (2) issued a *Federal Register* notice (86 FR 20744) to solicit feedback on nuclear industry AI activities, and (3) hosted a series of Data Science and AI Regulatory Applications Public Workshops. These three activities informed the development of the draft AI Strategic Plan. Based on feedback from the Data Science and AI Regulatory Applications Public Workshops, the NRC anticipates that the nuclear industry could begin deploying AI in NRC-regulated activities in the near future.

The draft AI Strategic Plan considers machine learning, natural language processing, robotics process automation, and deep learning to be subsets of AI. In

practice, the term AI describes various activities which range from data collection and analyses to support human decisionmaking to fully autonomous systems that can learn without human intervention or oversight. The AI Strategic Plan would contribute to regulatory certainty by ensuring continued NRC readiness to review the use of AI in NRC-regulated activities.

The draft AI Strategic Plan establishes five strategic goals to ensure the agency's readiness to review the use of AI in NRC-regulated activities. The five strategic goals are: (1) ensure NRC readiness for regulatory decisionmaking, (2) establish an organizational framework to review AI applications, (3) strengthen and expand AI partnerships, (4) cultivate an AI proficient workforce, and (5) pursue use cases to build an AI foundation across the NRC.

IV. Requested Information and Comments

The NRC is interested in obtaining input from stakeholders, including professional organizations, and interested individuals. The focus of the request is to gather information that will permit the NRC staff to develop and refine the draft AI Strategic Plan. The NRC welcomes comments from the public on any areas that they believe are relevant to these topics, and is particularly interested in receiving input on the following questions:

1. Are there any specific recommendations or improvements to consider in the development of the AI Strategic Plan?
2. What goals, objectives, or strategies within the NRC's current strategic plan should be added, enhanced, or modified in the AI Strategic Plan?
3. What are potential near-term, or far-term, AI activities that the NRC should be aware when finalizing and prioritizing the AI Strategic Plan, or associated supporting research?
4. What are potential challenges the NRC should be aware when preparing to review potential use of AI in nuclear applications?

V. Public Meeting Information

The NRC staff will hold a virtual public meeting on August 3, 2022, to receive comments on the draft AI Strategic Plan. A telephone line will also be used for the public to submit oral comments. A court reporter will be recording all comments received during the webinar and the transcript of the meeting will be made publicly available. Additionally, the NRC will discuss the agency's activities related to the development of the AI Strategic Plan or supporting activities for public input and comment on these activities and will continue to seek the views of stakeholders in identifying opportunities to improve the underlying strategic plan. The date and time for the virtual public meeting is as follows:

Date	Time	Location
August 3, 2022	1:00 p.m. to 3:00 p.m. ET	<p>Webinar Information:</p> <p>https://teams.microsoft.com/join/dRTQ6LXDakOgZV3vTGT1Lg,dY0urqMKG0-Gm00Y91vqrg,N7h1Wo8JnEK5NUmTIdvEqw,2FYud_DrR0260xwKOK2vAA,ujlylZhqmUGql9FnYzVx0g,m1ErSd8hxEO1k_cLUoH9eQ?mode=read&tenantId=e8d01475-c3b5-436a-a065-5def4c64f52e&webinarRing=gcc</p> <p>Telephone Access:</p> <p>Bridgeline: 301-576-2978</p> <p>Participant Access Code: 654 033 041</p>

Persons interested in attending this meeting should monitor the NRC's Public Meeting Schedule website at <https://www.nrc.gov/pmns/mtg> for additional information, the meeting agenda, information on how to provide verbal comments, and access information for the meeting. Those wishing to make verbal comments at the meeting should follow instructions listed on the NRC's Public Meeting Schedule website.

The NRC may post additional materials related to this document, including public comments, on the Federal rulemaking website. In addition, the Federal rulemaking website allows members of the public to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (**NRC-2022-0095**); 2)

click the "Subscribe" link; and 3) enter an email address and click on the "Subscribe" link.

Dated: June 29, 2022.

For the Nuclear Regulatory Commission.

Luis D. Betancourt,
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Accident Analysis Branch,
Division of Safety Analysis,
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